

## TENNESSEE RIVER BASIN

03497300 LITTLE RIVER ABOVE TOWNSEND, TN

LOCATION.--Lat 35°39'52", long 83°42'41", Blount County, Hydrologic Unit 06010201, in Great Smoky Mountains National Park, on left bank along Tennessee Highway 73, 0.3 mi upstream from Rush Branch, 0.4 mi southeast of Park entrance, 2.2 mi southeast of Townsend, and at mile 35.3.

DRAINAGE AREA.--106 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Data logger and crest-stage gage. Datum of gage is 1,106.92 ft above NGVD of 1929.

REMARKS.--Records good except for estimated daily discharges, which are fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,100 ft<sup>3</sup>/s and maximum (\*):

	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)		Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
	Sep 17	0215	3,570	5.94		Sep 17	1815	*4,770	*6.79

Minimum discharge, 51 ft<sup>3</sup>/s, Oct. 26.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	57	340	322	258	169	242	205	479	357	265	106
2	82	56	298	329	424	429	227	302	328	320	246	102
3	77	55	449	361	360	417	231	348	275	374	335	94
4	75	54	527	916	344	348	246	293	277	335	237	90
5	73	85	455	818	1,380	316	233	277	228	339	235	84
6	72	464	382	588	1,260	1,310	226	253	199	733	286	78
7	71	323	335	479	779	862	229	227	181	483	219	116
8	69	211	301	420	585	612	237	208	168	361	193	918
9	67	167	579	351	487	503	235	219	167	290	173	1,400
10	66	143	687	306	408	426	217	201	189	278	158	655
11	69	127	541	284	386	368	207	195	155	230	146	421
12	66	117	448	263	358	340	211	202	140	213	299	362
13	64	136	451	245	343	307	731	176	207	191	259	288
14	65	108	394	237	318	286	586	164	186	226	222	241
15	84	e105	359	217	335	285	489	151	166	185	196	208
16	67	e105	441	207	320	400	446	141	165	159	177	215
17	63	e100	395	341	303	349	390	143	142	188	165	3,390
18	61	e120	381	401	288	413	341	134	139	239	152	1,930
19	59	e2,100	333	330	273	351	303	164	128	163	134	926
20	58	1,470	296	302	263	340	275	131	118	144	124	606
21	56	891	281	277	257	353	252	119	129	127	164	445
22	54	587	284	251	234	304	229	187	249	116	152	352
23	53	469	546	239	223	277	212	231	270	130	132	295
24	53	529	516	318	219	259	198	170	412	109	151	255
25	53	580	441	406	209	241	185	142	1,090	119	215	227
26	53	487	385	386	204	226	344	132	1,320	257	210	207
27	80	e440	343	342	195	213	291	212	717	1,100	156	190
28	95	e730	314	314	183	203	245	165	547	598	136	280
29	69	e720	449	296	175	192	227	158	438	421	134	218
30	62	e430	372	266	---	211	214	196	369	363	125	187
31	59	---	342	245	---	246	---	680	---	302	117	---
TOTAL	2,081	11,966	12,665	11,057	11,371	11,556	8,699	6,526	9,578	9,450	5,913	14,886
MEAN	67.1	399	409	357	392	373	290	211	319	305	191	496
MAX	95	2,100	687	916	1,380	1,310	731	680	1,320	1,100	335	3,390
MIN	53	54	281	207	175	169	185	119	118	109	117	78
CFSM	0.63	3.76	3.85	3.36	3.70	3.52	2.74	1.99	3.01	2.88	1.80	4.68
IN.	0.73	4.20	4.44	3.88	3.99	4.06	3.05	2.29	3.36	3.32	2.08	5.22

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)

MEAN	121	211	334	410	451	506	389	289	223	198	167	126
MAX	373	436	725	796	857	1,195	818	774	648	815	530	496
(WY)	(1973)	(1967)	(1992)	(1996)	(1990)	(1994)	(1998)	(1984)	(1989)	(1971)	(1966)	(2004)
MIN	28.9	36.0	58.8	72.7	191	185	141	124	50.4	63.8	40.5	31.9
(WY)	(1988)	(1988)	(1966)	(1981)	(1978)	(1988)	(1995)	(1986)	(1988)	(1993)	(1987)	(1998)

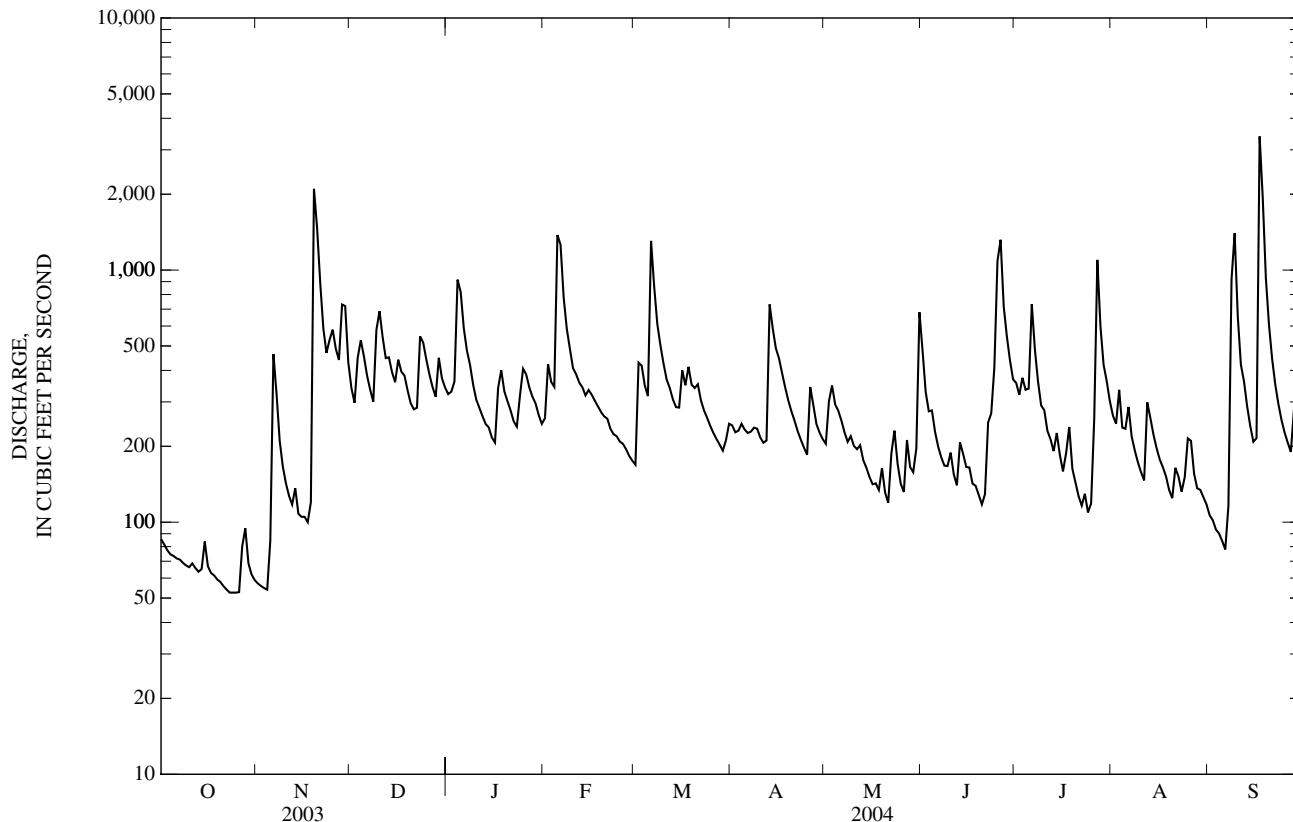
## 03497300 LITTLE RIVER ABOVE TOWNSEND, TN—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1964 - 2004
ANNUAL TOTAL	127,681	115,748	
ANNUAL MEAN	350	316	
HIGHEST ANNUAL MEAN			285
LOWEST ANNUAL MEAN			460
HIGHEST DAILY MEAN	6,920	May 6	1994
LOWEST DAILY MEAN	53	Oct 23	141
ANNUAL SEVEN-DAY MINIMUM	54	Oct 20	1988
MAXIMUM PEAK FLOW		3,390	9,000
MAXIMUM PEAK STAGE		Sep 17	Mar 28, 1994
INSTANTANEOUS LOW FLOW		4,770	Sep 15, 1998
ANNUAL RUNOFF (CFSM)	3.30	6.79	Sep 12, 1998
ANNUAL RUNOFF (INCHES)	44.81	2.98	Mar 27, 1994
10 PERCENT EXCEEDS	631	40.62	a15.75
50 PERCENT EXCEEDS	237	546	b21
90 PERCENT EXCEEDS	75	246	556
		86	196
			61

a From flood mark in gage house.

b Results of freeze-up.

e Estimated



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## WATER-QUALITY RECORDS

PERIOD OF RECORD--August 1963 to April 1997. October 2003 to September 2004.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf 25 degC uS/cm (00095)	Temper-ature, water, deg C (00010)	Hard-ness, water, mg/L as CaCO <sub>3</sub> (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Chlor-ide, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)
OCT													
21...	1030	56	24	11.9	--	--	--	--	--	--	--	--	--
21...	1425	--	--	--	9	2.31	.73	.66	.2	1.10	20	.5	3.17
NOV													
19...	0440	--	--	--	10	2.54	.82	--	--	--	--	.5	3.09
19...	0615	--	--	--	9	2.21	.79	--	--	--	--	.5	2.92
19...	0720	--	--	--	10	2.49	.93	--	--	--	--	.5	2.84
19...	0730	--	--	--	11	2.68	1.00	--	--	--	--	.5	2.80
19...	0835	--	--	--	9	2.19	.75	--	--	--	--	.5	2.77
19...	0900	--	--	--	9	2.36	.82	--	--	--	--	.5	2.77
19...	0925	--	--	--	11	2.81	1.02	--	--	--	--	.5	2.65
19...	0940	--	--	--	17	4.27	1.51	--	--	--	--	.5	2.70
19...	1125	--	--	--	34	8.27	3.25	--	--	--	--	.5	2.09
MAR													
11...	1045	370	16	5.0	--	--	--	--	--	--	--	--	--
JUN													
21...	1120	109	21	20.0	--	--	--	--	--	--	--	--	--
21...	1145	--	--	--	7	1.82	.55	--	--	--	--	.4	2.99
21...	1200	--	--	--	7	1.85	.56	--	--	--	--	.4	3.01
AUG													
13...	1105	258	16	16.2	--	--	--	--	--	--	--	--	--
SEP													
14...	0930	--	--	--	5	1.37	.40	--	--	--	--	.4	2.85
14...	0945	--	--	--	5	1.37	.40	--	--	--	--	.4	2.88

Date	Sulfate water, fltrd, mg/L (00945)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water, fltrd, mg/L as N (00618)	Organic carbon, water, fltrd, mg/L (00681)	Alum-inum, water, fltrd, ug/L (01106)
OCT					
21...	1.8	<.028	<.03	1.2	<27
NOV					
19...	2.1	.465	.03	2.4	<27
19...	1.9	.409	.10	2.8	<27
19...	1.9	.564	.19	3.0	<27
19...	2.2	.419	.42	2.5	<27
19...	2.1	.497	.21	3.0	<27
19...	2.1	.485	.31	2.9	<27
19...	2.1	.335	.43	3.0	<27
19...	2.3	.567	.39	3.2	<27
19...	3.0	.194	.92	2.5	<27
JUN					
21...	1.5	<.028	.13	1.2	120
21...	1.5	<.028	.13	1.1	40
SEP					
14...	1.6	<.028	.09	1.0	<27
14...	1.6	<.028	.09	1.0	<27

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